

Notice of Allowability

Application No.

10/669,757

Applicant(s)

KLOTZ ET AL.

Examiner

Art Unit

Sheridan L. Swope

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to July 19, 2007.
2. ☒ The allowed claim(s) is/are 1,60,61,130,133,138-140,143-145 and 151-154.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Applicant's response, on July 19, 2007, to the Action on the Merits of this case mailed January 29, 2007, is acknowledged. It is acknowledged that Applicants have amended Claims 1, 130, 138-140, and 143-145 and added New Claims 151 and 152. Claims 1, 60, 61, 130, 133, 138-140, 143-145, 151, and 152 are pending and are hereby considered.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Specification

On page 9, line 9, delete: -[http://www.compbio.dundee.ac.uk-/papers/amas/amas3d.html](http://www.compbio.dundee.ac.uk/papers/amas/amas3d.html);-.

Claims

Replace Claims 1, 60, and 61 with the following.

1. A variant of a trypsin polypeptide, wherein the variant comprises the specific combination of modifications as follows:
 - (a) substitutions at positions corresponding to positions 144, 193, 198, 201, 218, 223, 227, 228, 229, 230, and 231 of amino acids 25 to 248 of SEQ ID NO: 2;
 - (b) deletions at positions corresponding to positions 192, 197, and 226 of amino acids 25 to 248 of SEQ ID NO: 2; and

Art Unit: 1652

(c) an insertion between positions corresponding to positions 224 and 225 of amino acids 25 to 248 of SEQ ID NO: 2; and

wherein, the variant has chymotrypsin activity and

(i) has at least 90% identity to amino acids 25 to 248 of SEQ ID NO: 2; or

(ii) is encoded by a nucleotide sequence which hybridize under at least medium-high stringency conditions with nucleotides 202 to 801 of SEQ ID NO: 1 or the complete complementary strand thereto, wherein medium-high stringency conditions are defined as prehybridization and hybridization at 42°C in 5X SSPE, 0.3% SDS, 200 µg/ml sheared and denatured salmon sperm DNA, and 35% formamide followed by washing three times each for 15 minutes using 2X SSC, 0.2% SDS at 60°C.

60. The variant of claim 1, wherein the variant is encoded by the nucleotide sequence contained in pEJG66.1XLGOLD, which is contained in E coli NRRL B-30627.

61. The variant of claim 1, wherein the variant is in a form of a precursor comprising amino acids 1 to 24 of SEQ ID NO: 2 as a prepro region, or a portion thereof, linked in translation reading frame with the amino terminus of the variant.

For Claims 143 and 144, replace –nucleotides 202 to 801 of SEQ ID NO: 1 or the nucleotide sequence of nucleotides 202 to 801 of SEQ ID NO: 1– with – the complete nucleotide sequence of nucleotides 202 to 801 of SEQ ID NO: 1–.

For Claim 152, delete the second period (.) at the end.

Add the following claims.

153. The variant of claim 1, wherein the variant has at least 95% identity to amino acids 25 to 248 of SEQ ID NO: 2.

Art Unit: 1652

154. The variant of claim 153, wherein the variant has at least 97% identity to amino acids 25 to 248 of SEQ ID NO: 2.

Authorization for this examiner's amendment was given in a telephone interview with Robert Starnes on September 11, 2007.

Allowable Subject Matter

Claims 1, 60, 61, 130, 133, 138-140, 143-145, and 151-154 are allowed.

The following is an examiner's statement of reasons for allowance:

All allowable claims, Claims 1, 60, 61, 130, 133, 138-140, 143-145, and 151-154, are limited to polypeptides that are trypsin variants, wherein the variant has chymotrypsin activity and has at least 90% identity to the trypsin derived from the *F. oxysporum* as set forth by SEQ ID NO: 2 or is encoded by a polynucleotide that hybridizes at least medium-high stringency to SEQ ID NO: 1. The specific variants recited are not anticipated by or rendered obvious by the prior art.

The utility of the recited variants, as having chymotrypsin activity, is credible based on expression in heterologous host cells and analysis by an enzymatic assay (Example 5; Fig 6). The recited polypeptide variants have real-world utility as an additive for detergent compositions, for example laundry detergents and, therefore, have a specific and substantial, patentable utility.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 1652

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheridan L. Swope whose telephone number is 571-272-0943.

The examiner can normally be reached on M-F; 9:30-7 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheridan Lee Swope, Ph.D.
Art Unit 1652



SHERIDAN SWOPE, PH.D.
PRIMARY EXAMINER